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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 4 1921

REPORT FOR WEEK ENDING JUNE 4, 192[illegible].

Akron:

Oats on the rotations have begun to show the effect of shortage of moisture. The lower petals are drying up and dropping off. Otherwise spring grains are not yet showing the effect of drought. Winter wheat continues to show shortage of moisture on all the plats except the fallows. It is the concensus of opinion that the winter wheat crop generally over the county is not yet damaged, but many are beginning to fear the consequences of drought. This week end - beginning Friday noon and extending well towards noon of today Saturday - the clouds have been skirting the earth surface as a mist and .10 of an inch of precipitation was measured in the gauge this morning. The relief is only temporary and the country side is still awaiting the rain which is needed. The month of May passed as one of the lightest rainfall summer months within the history of weather records at this place.

During the week the rotation fallow plats were plowed, as also were plats A of the continuous cropping kafir and milo series. Inclement weather has interfered with plans made for seeding the kafir and milo plats this week end. All the alleys of the Cereal Project and of the rotation plats were cultivated. The rotation roads were graded the fore part of the week and progress has been made towards getting the Cereal Project plats trimmed preparatory for grading the roads. The fruit garden was cultivated and hoed and one three acre strip plowed preparatory for seeding sorghum and millet varieties. This ground in several places turned up very cloddy and dry.

Maximum temperature 89; minimum 42; precipitation .13 inch. Total precipitation was .50 inch as against an average of approximately 2.50 inches. This .50 inch was accumulated from 12 different showers, the heaviest of which totalled .28 inch.

Big Spring:

Late Tuesday evening, May 31, the station was visited by a bad hail and rain storm, amounting to 1.30 inches. Practically all the precipitation occurred in 20 minutes and was accompanied by a very hard wind that reached a velocity of from forty to forty-five miles per hour. The hail destroyed the crops on some 150 experimental plats, including cotton, variety peas, and the variety grain sorghums. The milo, kafir, corn, and peanuts in the rotation and c.c. series suffered considerably, but a sufficient stand remained on most of the plats, so that iw will not be necessary to replant but a few of them. The wheat in the c c. and rotation series was damaged as well as the peaches, plums, and grapes in the vineyard and experimental orchard. This storm was local in character and covered a very small section of the county. Considerable soil washing occurred on the farm and the run-off of water was great. South and west of the station buildings some three acres was covered with water from six to twelve inches deep. The total rainfall at the station for May was 3.69 inches. The local weather observer in Big Spring, a distance of about one mile reports 2.12 inches for May. The southwest portion of the county is still very dry and there is a large area of several thousand acres of farming land that has no crops to speak of. The total precipitation for the year from January 1 to May 31 amounts to 6.10 inches. The average for this period is 5.92 inches.

Maximum temperature 99; minimum 62; wind velocity 5.4 miles per hour; evaporation 2.40 inches; precipitation 1.31 inches.

Colby:

The present week ended the prolonged drought which threatened to cut short the yields of all the winter wheat plats on the station. The plats that received the early fall plowing treatment were affected the most. Wheat is practically all headed out except the late seeding and that sown on corn and milo ground. Heads are short but with a plentiful supply of moisture at the present time they should fill good. While the early fall plowed plats show the worst effect of the drought by the severe browning which had taken place, the fallow plats which had a rank growth were beginning to be damaged considerably. All damage done to most commercial fields throughout the county is rather spotted. Straw will be short in manycommercial fields. Those fields that had a moderate amount of pasturing seemed to stand the drought the best. While most of the foliage has been lost from the dry spots the heads and stalks have taken a bright green appearance and promise to make economical use of the present supply of moisture. The first rain Decoration Day, at night, and was 1.24 inches and more or less general. It has been cool since. We had .88 inch Thursday night and the damp and somewhat misty or rainy weather since has made 2.48 inches with a mist in the air all day to-day (Saturday). Roads are a fright.

Milo will probably have to be replanted as well as many fields of commercial sorghums. With water standing in listed furrows some corn will be replanted, from present indications.

The rains have not been general in amount over the county, some localities receiving not more than a light shower, while Colby seems to have received the maximum amount. No damage has been reported from hail in this county, unless a local field. The county north of Thomas - Rawlins - and the county west of Rawlins - Cheyenne - report considerable damage from hail. A strip from east to west was covered across the two counties extending on into Colorado. The County Agent of Cheyenne county reported to the writer today that he estimated the total loss for Cheyenne county to be at least 30 per cent of the acreage.

Maximum temperature 90, on the 29th; minimum 53, on June 4; precipitation 2.48 inches; last three days of the week cloudy and damp.

Dalhart:

Conditions here have been both favorable and unfavorable the past week. The fore part of the week was ideal for field work and good progress was made. The last two days - Friday and Saturday - were unfavorable in a way. On Thursday night .81 inch precipitation was recorded and on Friday night 1.27 inches was recorded. Everything seems to be under water at this writing. The soil is pretty well soaked and the water that fell in the last two rains is standing in small lakes on the surface.

Field operations for the week have been in soil preparation and planting. The 3d date was planted on time; also all kafir on the M.C. plats, alternate fallow methods and on all rotations. This planting was made Thursday for kafir and everything was in readiness to plant the milo and cowpeas Friday and thus complete the planting on all D.L.A. rotations. At the same time work on the Cereal and Forage block was to have been under preparation for that planting, but all this was stopped. Two days and a half plowing and harrowing will put the Cooperative block in readiness to plant. The D.L.A. rotations will be finished as soon as soil conditions will permit.

Maximum temperature 90; minimum 53; precipitation 2.08 inches.

Edgeley:

The past week has been cool and cloudy. All cereal crops with the exception of rye are looking fine. Fall rye appears to be a thin stand in most of the fields. Corn is all up, but owing to cool weather is making very slow growth. Soil samples show the soil contains a high percentage of moisture.

Maximum temperature 69; minimum 34; precipitation .88 inch.

Garden City:

The dry spell of nearly a month was broken on the night of June 2, when a hard dashing rain of 1.67 inches fell, but it came with such force that the full benefit of it was not received, as a large amount of run-off took place. Much more rain fell west of here which caused the Arkansas river to raise to a point seldom seen here. Although the rain helped the wheat considerably, some of it was too far gone to revive again. A hard hail storm accompanied the rain south of the river and it destroyed a large amount of wheat. The insurance men are making adjustments ranging from forty to one hundred per cent on the damaged grain.

The work of the week consisted of planting milo, kafir, and cowpeas in the rotations, and also the June 1 date of seeding. The fallowed plats were also plowed and the spring listed plats cultivated.

Maximum temperature 96; minimum 56; total precipitation 1.78 inches.

Havre:

The first part of this week temperatures were below normal with a minimum of 31 on the night of the 29th. There was no freezing and no damage that could be detected even on tender garden vegetables. The latter part of the week has been about normal with a maximum of 78. A shower of .18 inch was recorded on the 1st. Crops have been making good growth. Winter rye is almost in the bloom; winter wheat on the best plats is in the boot; and spring wheat that was seeded early is shooting.

Twelve plats of winter wheat where the stand finally died out were seeded to Marquis. The reseeding was on plats that were either on fall plowing, or were disced in. Other plats are looking very good, especially those on manured fallow. The cause for the loss of stand on the plats that were reseeded was probably due in part to dry conditions in late winter and early spring, and partly due to injury by the pale western cut worm. This worm is still in the soil and may get into the reseeded corn crop which is making good growth. While there are some plants in all plats that are cut off, the damage is much more noticeable and more severe on some that on others. The damage seems to be worse on fall plowing than on any other method, early spring plowing being the least affected. In the vinimity of the station there are some fields of late spring plowing that have been entirely taken.

Hays:

Much of the wheat over the country which last week was burning and looked ruined is responding to the changed conditions - is coming to life and now looks promising for a fair yield, but the straw will generally be short. Wheat on fallowed ground on the project has commenced lodging in places. Oats and barley are short but looking good.

The Experiment Station commenced harvesting the first crop of alfalfa on the commercial fields in time to get caught with considerable acreage of hay in the winrow and swath.

Hays, continued:

For the week ending May 28, the maximum temperature was 93, minimum 52, precipitation .08 inch. Generally the weather was warm to very hot the latter part of the week with hot winds the 27th and 28th. It was also very dry, so that with the hot winds the last two days, conditions were very unfavorable for the small grains, most all of which were attempting to head, if not already headed. The foliage was firing from the ground to the heads and in some cases the tips of heads were turning white because of drought and heat. Prospects for wheat yields were very discouraging.

For the week ending June 4, maximum temperature 99, minimum 56, precipitation 2.02 inches. Generally the climatic conditions for the past week were extremely the opposite of that of the previous week. It commenced raining May 30 and has been raining, foggy, or misty most of the time since. There has been but little sunshine and heavy rains are being reported in most all directions. Small areas have suffered hail losses.

The ground has been too wet for any field work during the week.

Huntley:

The outstanding feature of the past week was the torrential rain and hail storm which visited this section on the evening of May 31. The storm was accompanied by a terrific wind which did more damage than was done by the hail alone. The precipitation caught by the hail gauge measured 1.33 inches, while the evaporation tank caught water to the amount of 3.14 inches before it overflowed. It is very probable that a considerable portion of the water caught in the evaporation tank was the result of splashing and run-off from the surrounding ground. The storm did not last more than 20 minutes and as the hail quickly puddled the surface soil, little moisture penetrated the ground and run-off was excessive. Damage to field crops was comparatively light owing to their youth, and it is expected that most of them will recover from the set-back. The first cutting of alfalfa was rather badly stripped of foliage and seedling alfalfa was damaged chiefly by being washed under the mud. Cool and cloudy weather following the storm has been advantageous in keeping the surface soil from cursting and giving the crops a chance to straighten up out of the mud.

Field work has been at a standstill since the rain, but the ground is drying off rapidly today and it is hoped cultural operations can be resumed early next week.

Maximum temperature 70, minimum 36; precipitation 1.45 inches.

Judith Basin:

The past week has been comparatively cool and cloudy with light precipitation occurring nearly every day. A heavy rain of .89 inch was received on June 1. Some run-off occurred but the rain as a whole was very beneficial and arrived at an opportune time as the soil was becoming dry. Crops, however, had not begun to suffer from lack of moisture.

All crops have made a good growth and alfalfa and clover have made exceptionally rapid progress. Spring wheat, reseeded on winter wheat and rye plats is up. All trees and bushes are now in full leaf and the lawns and pasture are in excellent condition.

Maximum temperature 65; minimum 36; precipitation 1.02 inches.

Lawton:

The last week was very favorable for field work and much progress was made in cultivating and thinning row crops. All grain sorghums and forage sorghums, six acres alternate row kafir, and cowpeas, and all row plats in field B were cultivated. Thinning of sorghums has been completed with the

Lawton, continued:

exception of late dates and four plats of feterita which were replanted this week. A few early plats of kaffirs, broomcorn, milo and sumac were not thinned, as the chinch bugs have practically taken them. Over thirty plats of cotton have been chopped, while about twenty remain.

Fulghum oats in plats were cut the 1st of June, while Texas red oats in increase fields will be ripe early in the week. Wheat is also turning fast and will be cut as soon as the oats are harvested. Both crops will be short this year, as the rainfall in May was only 1.20 inches, as compared with a mean of 5.16 inches.

Maximum temperature 94; minimum 64; average wind velocity 5.4 miles; evaporation 1.754 inches.

Mandan:

Agronomy.

The first cultivation of the corn plats was completed June 2. The soil was in good condition for cultivation and in some cases very much in need of it. fall plowing was quite weedy, whereas spring plowing was practically free from weeds.

Report has reached the station of a field of wheat south of Mandan having been entirely taken by cutworms. There has been noticeable damage to flax on the station but not as serious as in former years. Slight damage to corn by cutworms was observed, but not enough to reduce the stand below the requirements.

Land is being prepared for planting sorghum, millet, and some sorghum-sudan grass crosses made by Mr. Dillman. Some red amber sorgo will be planted in the silage test.

Work trimming plats and cultivating alleys and roads will be practically finished the present week.

Cooperative Grazing Experiment.

At the end of May the cattle of the various pastures showed an average increase in weight of better than 50 pounds per head, for the previous ten days. The individual differences were from 20 to 100 pounds per head.

Seeding of the cultivated pasture will be practically completed today. The grass is going in under very desirable moisture conditions.

Horticulture.

Final planting in the acre garden has been completed. About 4800 tomato plants have been set out in the breeding plats for slection purposes. They are second generation plants of various crosses and should give good results.

The grounds have been groomed for the summer; flower beds planted; and shrubbery pruned and cultivated.

Pruning fruit trees has also been completed. No effort was made to do very systematic pruning, but dead and broken limbs were removed, and , in some instances a certain amount of thinning out was done.

The first spraying of fruit trees and shrubs has been completed, but the spray was undoubtedly rendered less effective by rains washing a part of the material off shortly after it was applied. However, with the exception of tent caterpillars, insects have not been very much in evidence as yet, although blister beetles are beginning to appear. Some of the sandcherries and plums on the station grounds are badly infested with plum pockets. Any infested areas will be sprayed with lime sulphur, 1-10, before the buds open next spring. This disease has probably been encouraged by the damp, cool weather.

Mandan, continued:

Plum pits planted in the seed beds last fall are germinating in good shape. Also many plums are now coming up from seed planted in 1919, but which failed to germinate last year.

Agriculture.

Hoeing of tree fields has continued this week when it has not rained. Taking of notes on all Species and Testing blocks, Shelterbelt combinations, and Experimental blocks, has begun. In comparison with previous years very little winter injury is being recorded. Many trees, however, still show the effect of the previous years drought, and have not leaved out in their upper branches. This is probably accounted for by the fact that the moisture of this spring has not as yet reached the lower root levels.

Mr. Virgil Gilman of Bozeman, Montana, arrived May 31, to inspect shelterbelt plantings this summer.

A block of black ash and arbor vitae from the Cloquet Experiment station have been planted. Thirty-five grams of Chinese elm seed was picked and this small amount planted in the seed beds. This is the first time since May 1918 that the trees have borne seed. The native elms again have no seed this year, due to the recent freeze.

The total precipitation for May was 3.05 inches. This amount is .58 above the 45-year average for May, and bring the total for the season up to .61 above the 45-year average.

North Platte:

The entire week has been cool and cloudy. Precipitation amounting to 1.04 inches has fallen. May precipitation was 2.45 inches, which is 77 per cent of the normal. Grain crops have made a good growth and are all in good condition. Winter wheat is nearly all in head.

Sheridan:

The weather has continued cool and cloudy with considerable wind. Several light showers occurred during the week, but only one was sufficient to more than wet the surface of the ground. A good rain fell Thursday evening.

All crops have been growing in good shape, except alfalfa seeded solid, which is showing a lack of moisture. Around the edges of the plats, and in rows the alfalfa is making a good growth. Winter rye has headed out, and brome in the rotation is heading. The brome, however, is quite short. Weeds are also getting started and making a fast growth. Thistles apparently will be worse in the plats than last year. In some of the flax plats, the thistles already seem to have the start of the grain.

All of the alleys in the rotations have been cultivated once. The first cultivation of corn in the rotations was completed today. The roadways are also being marked out today. Seeding of all forage crops was completed during the week.

Maximum temperature 77; minimum 36; precipitation .55 inch.

Tucumcari:

Weather conditions moderated somewhat the past week for a few days, which permitted of some field work in way of preparation and planting. The first date of planting in the Cereal project was made on the 1st, about 15 days late. Field corn was planted on the rotations and M.C. plats on May 30, so that some of the

Tucumcari, continued:

work is out of the way. The field work was progressing nicely and nearing completion until everything was stopped by a rain. On the night of the 21 a small shower occurred which stopped some of the field work, but it was not so much but that harrowing could be continued. Unless rains keep occurring every few days to keep the teams out of the field, planting can be resumed some time next week.

Maximum temperature 90; minimum 54; precipitation .24 inch.

Woodward:

The past week has been warm and cloudy, with rather light wind movement. Some rain has fallen on three different dates, netting a total of .97 inch precipitation, none of which fell fast enough to cause any run-off. These rains put the ground in fine shape and all of the row crops that have been planted long enough to become well established are growing in fine shape. Milo, June corn, and cowpeas and beans that were planted last week are in most cases up with good stands. All of the wheat on the station is about ripe. It is probably two weeks or more earlier than most of the wheat around here, some of which was planted about the same time but was pastured.

Work during the week has consisted of cultivating the orchard, vineyard, two of the fields that are in kafir, the kafir on the D.L.A. project, and some cultivation on the Cereal Office project. Some summer pruning has been done in the vineyard.

Our annual fight with the moles is on. They seem to take great pleasure in going under the rows and destroying the stand. Some moles are being caught but they do not seem to be as easy to catch as they were last year.

Maximum temperature 96; minimum 61; average hourly wind velocity 6.3 miles; evaporation 2.085 inches; precipitation .97 inch.

PLANT INDUSTRY

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JUN 11 1921

REPORT FOR WEEK ENDING JUNE 11, 1921.

Akron:

The week has been interspersed with hot weather and very light showers. Corn that is up has found the weather very favorable and is making rapid growth. Spring grains, especially oats are suffering because of the lack of moisture. The same may be said of winter wheat, except where sown on fallow land. On fallow ground winter wheat appears not to be suffering because of the drought. The foggy weather reported at the end of last week continued until Monday of this week. At times some rain fell. During the whole period .46 inch of precipitation was measured. At two other times this past week rains threatened only to pass to either side of this section. Alfalfa is making no progress. Sweet clover, however, is making a very nice growth. Sweet clover on rotations 31 and 32 was plowed under during the week and had attained a growth of almost waist high round the edges and stood on an average knee high in the middle of the plats. Green manure rye plats were also plowed under during the week. The rye had attained an average height and was in the bloom stage. Other work consisted of discing and harrowing a strip which was later in the week planted to millet and sorghum varieties. Milo and kafir were seeded on the rotation plats. Several of the rotation corn plats were replanted. In many cases it is felt that corn of the original planting will come up since the rain of the early part of the week, but it was felt to be a better plan to seed more corn while yet it will have a chance to mature. Both orchards were hoed and the shrubbery about the building hoed. Today the station grounds are being moved.

Maximum temperature 84; minimum 59; precipitation .56 inch.

Big Spring:

Most of the week has been wet with showers occurring on five different days. As a consequence not much field work could be accomplished, though we managed to get the variety plats of grain sorghums replanted. Cotton, peas, and other crops replanted since the hail and rain storm of May 31 are up to a good stand. Weeds are growing rapidly and there is need of thinning the milo in the cc and rotation plats. Wheat was harvested during the week, but the yield will be light this season. The height of the crop ranged from 10 inches on Plat A in the c.c. series to 19 inches in rotation 167. The weather is still threatening and more rain will likely fall before this spell is over with.

Colby:

Rainy weather for the previous week continued into the first half of this week. Ground remained too wet to work all week with the exception of a few places which would do this afternoon. This period (two weeks) makes the longest that we have been out of the field since spring work commenced.

All of the corn plats are up nicely, some of the drier spots in some of the plats did not show a stand until the fore part of this week. Several of the milo plats will be replanted. Winter wheat has recovered considerably from the effects of the drought. The early fall plats which had suffered the worst will suffer the greatest loss. Some of the heads on the plats were burned so badly that they will not recover. All plats that were checked will have both short heads and short straw. Barley is thin but is about 75 per cent headed. Spring wheat and oats are just beginning to head nicely. Kafir is up to a good stand.

Precipitation for the week was 1.58 inches, which fell in about six equal showers. This made the rainfall for the wet period 4.06 inches. Maximum temperature for the week 84; minimum 53. Average wind velocity 7.4 miles per hour; however, the last four days showed approximately 4 miles per hour.

Dalhart:

No rain fell the past week but the fields were so wet from rains of the week before that no work could be done until Saturday. The weather has been fair and warm with little or no wind so that the dry off of fields was slow, which favored the newly planted crops.

No planting could be done at all during the week but the first date of planting was dry enough to cultivate by Saturday. Other work consisted of fence repairing, hoeing, cultivation of tree plantings and other odd jobs.

Unless another rain occurs to stop field work, the remainder of the planting on the D.L.A. rotations will be finished Monday and plowing will be in progress for planting Cereal and Forage varieties. Everything in the way of field work is behind in this section. Very little planting has been done and weeds are growing so rapidly that they present a real problem. Many farmers had double listed their land in preparation for planting and were delayed so much from planting, by rains, that the weed growth has been rapid.

Maximum temperature 85; minimum 54; precipitation 0.

Dickinson:

Dry hot weather has continued during the week and all grain crops are now showing lack of moisture. Unless a good rain comes within a few days some fields will be damaged beyond recovery. Showers have occurred nearly every day during the past week in certain localities, but these have covered only a small area. On the rotations spring plowed plats are in better condition than other methods of tillage. The best wheat on the station is on sod plowed early in the season of 1920 and not cropped.

Alfalfa, sweet clover, and grasses seeded in rows last year have made a fair development, but the broadcast seedings have made only a short growth. This year's seedings of forage crops have good stands with an exception of millet varieties. Of the seedings made this spring with sweet clover the best results are from Arctic, a selection developed by the Saskatchewan Experiment Station, Saskatoon, Saskatchewan. While the growth is still small this selection is decidedly more vigorous than other white flowered sweet clover, including the annual.

Mr. C. N. Ainslie has identified the cutworm working in the vicinity as the Pale Western Cutworm. Corn seems to be the only crop attacked in this locality but reports have come in from other parts of the county of wheat and oats being damaged. At Beach this worm has done much damage in all small grains, both spring and winter, the greatest injury being on land which was in stubble or covered with vegetation during late summer of last year.

Visitors during the week included Mr. J. M. Stephens, Mr. R. Newton, of the Alberta Experiment Station, Edmonton, Alberta, Mr. H. L. Westover, Office of Forage Crop Investigations, and Mr. C. N. Ainslie of the Bureau of Entomology.

Maximum temperature 98; minimum 45; precipitation .61 inch. Precipitation during May amounted to 1.78 inches, or .65 inch below and the total to date for June is only .08 inch.

Edgeley:

Crops are looking good here, but will soon be in need of rain. Forty to fifty miles west of here the crops are badly in need of moisture. Fall rye has been in head for more than a week. Hay crops are looking good and with favorable weather should be a good crop.

Maximum temperature 85; minimum 47.

Garden City:

Very little field work was done this week, for the rain of June 3 which ended the drought continued daily until the 9. A total of 3.75 inches of water fell during this time, which left the fields so wet that they could not be worked until the last of the week. Most of the sorghum planting was completed before the rains, and it all came up to a good stand, as also did the weeds. The weather remained cool and cloudy following the wet spell, so that little or no baking of the soil occurred; this allowed the crops, which has just been planted to come up to a good stand.

The flood waters which did so much damage at Pueblo, Colorado, caused the Arkansas river to raise about six feet here. It overflowed its banks and for a time threatened to get up into town. The bridges at the two little towns on either side of Garden City were washed out, as was the fill put in on both sides of the new bridge here.

Maximum temperature 86; minimum 56; total precipitation 3.75 inches.

Havre:

The week has been generally warm with two showers amounting to less than one half inch. The spring grains are shooting and are beginning to need moisture on land that was cropped to grain last season. That on fallow and corn land is still looking good with no burning. Some of the disced in plats are getting weedy and the grain is burning slightly, and the smaller stools are dying.

The corn on the plats is large enough now that the cut worms have nearly stopped their damage. Some of than on fall plowing will be very thin, while there was but little damage on the early spring plowing. A commercial field of 50 acres, however, that was plowed after the 10th of May is badly infested and the outlook now is that the most of this field will be taken.

Over the county the damage on the early spring grain is estimated by the County Agent to be nearly 25 per cent of the acreage seeded. The early seeded grains are now too large to be damaged, but a great deal of injury is noted to the later seeding.

Hays:

The weather has been generally cloudy, rain, and cool. It has rained every day except one and has rained enough to keep the fields continually wet, so no field work was done. This makes two weeks the teams have been kept out of the field. Needless to say, field work is piled up, and harvest is not more than two weeks off. In fact if it should turn suddenly dry as it is very apt to do, we will have commenced harvesting some of the earlier grains in 10 days.

All row crop ground and fallow is badly in need of work. Corn is about 15 inches high. Kafir three or four inches. Canada field peas are very even at 32 or 33 inches; in full bloom and ready to be plowed under as soon as the ground is dry enough. Alfalfa is also ready to be harvested. The growth of alfalfa in rotation 141 on the high land is lighter than usual. The growth of alfalfa on fertilizer on bottom land is much heavier, but not as good as the first crop was last year. During the last few days of wet weather, wheat on the fallow plats has lodged slightly, but probably not enough to prevent filling.

It is now evident that some of the wheat was considerably damaged by the drought just precedeing this rainy period. Also the spring grains failed to respond to the rains and improved weather conditions as it was first throught they would do.

Huntley:

The warm, humid weather of the past week has been very favorable to crop growth, the response by corn and winter wheat being especially noticeable. A gentle rain amounting to .32 inch did much to revive crops that were battered up by the hail storm of a week ago, and also served to soften up the surface soil which was packed by the storm and was beginning to bake and crack.

Winter rye pasture was stocked with hogs this week. This was about a month later than usual owing to the rye not coming up until this spring. Plowing of summer fallow and the cultivation of row crops, roads, and alleys is under way.

Temperature - Maximum 84; minimum 52; precipitation .36 inch.

Judith Basin:

Warm weather has prevailed throughout the week, and the highest temperature thus far of the season was recorded on the 6th when the mercury rose to 81. A minimum temperature of 44 occurred on the 9th and light rains totalling .27 inch of precipitation were received.

Conditions as a whole were very favorable to the growth of all crops. Alfalfa has attained a height of from 12 to 18 inches, and brome grass is heading, while winter wheat in the increase fields is in the boot. Spring wheat, barley, and oats are commencing to joint, and flax is from 2 to 3 inches high. Corn and potatoes are up.

Field work during the week has been devoted chiefly to plowing of summer fallow on the rotations, Cereal project, and increase fields.

Lawton:

Rain was received on six days of the past week, total precipitation for this period being 3.03 inches. Row crops were greatly benefitted, while wheat and oats were practically ripe before the rain came. Runoff was slight and all plats are now in excellent condition, except where weeds are getting a start.

During the rainy period broomcorn and cottonseed were marketed; rats under the station buildings drowned out; and Bermuda sod placed on the pond dam.

All station grain, with the exception of 10 plats of late "Rate and Date" wheat was cut between rains this week. A five acre field of increase oats was cut Thursday afternoon; 45 plats of wheat were cut Friday afternoon, while the nine acre field of increase oats was cut Saturday. Cotton chopping was completed this week.

Mr. H. H. Schutz, Bureau of Crop Estimates, of Oklahoma City is visiting the station today, the 12th.

Maximum temperature 89; minimum 64; precipitation 3.03 inches; average wind velocity 3.4 miles per hour.

Mandan:

Agronomy.

All fallow plats were plowed and harrowed early in the week. The roads and alleys have been cultivated and are now fairly free from weeds.

Winter rye has been fully headed for some days and will be turned under today.

Yellow sweet clover in the forage crop tests will be harvested today. This crop came through the winter in much better condition than the White sweet clover.

Corn and small grains are making excellent progress. Wheat on manured fallow is two feet high, while that on fall plowed corn ground is 16 inches high.

Mandan, continued:

Cooperative Grazing Experiment.

Seeding of the cultivated pasture was completed the fore part of the week. The native vegetation continues to make a rapid growth, and all pastures are in excellent condition for grazing at the present time.

Arboriculture.

Cultivating of all tree fields and blocks has begun for the second time. Hoeing has been completed for the first time.

Spraying of all Caragana, Ash fields, and blocks of Linden, Hackberry, and Russian olive, was begun Monday, and is being finished today. The blister beetles were just beginning to appear, and the spray has been ver effective in driving them away and exterminating large numbers. Two and one half pounds of powdered arsenate of lead to the fifty gallons of water was used in the power spray. These will all be sprayed in about a week or so.

Preparing of route maps for the summer inspection has begun, and already shows an increase over last year's number. There will be 1133 plantings and applications to be visited this season, as against 972 last year.

Horticulture.

"Winter Injury" notes are now being taken on fruit trees and shrubs in experimental plantings. It appears that plants were damaged very little last winter in comparison to previous winters. While some tip killing will be reported, it is thought that this may be due more to drought than to damage by cold. Even pears and such tender apples as Delicious, in the "1919 Combination Fruit Patch" escaped with no killing back of twigs, and only a slight browning of the wood. In this connection it might be mentioned that the trunks and lower limbs of all pear trees were protected with a mulch, yet limbs that were entirely exposed above the mulch were not damaged. As far as can be observed, it made little difference whether trees were planted on the hillside or in the coulee last year. They all came through in good shape. Likewise, the affects of different treatments in the "Hardiness Investigations" test, are not noticeable this year.

The shrubbery on the ground is looking especially well this year. Spirea Van Houttii and Syringa persica have been amoung the most beautiful of the flowering shrubs.

Work during the week has included the routine work on the grounds, cultivating and weeding in the vegetable gardens, and orchards, and spraying.

Sheridan:

The week has been quite warm with several local showers. Very little of the rain has fallen at or near the station, however. Crops have maintained a steady growth. Barley in the Rotations has begun to shoot. The alfalfa crop will be very light without considerable moisture very soon.

The work on the station has consisted principally in cleaning out the roads and the alleys, the shelterbelt, and the garden. All of the alleys in the rotation field were cultivated again during the week, while the shelterbelt was cultivated again and hoed. On the 4 x 8' block one section of the Clack weeder was used one way with good success. All of the trees in the shelterbelt and the shrubbery set out this spring are making a good growth.

Maximum temperature 84; minimum 50; precipitation .18 inch.

Tucumcari:

Field work was done when possible last week - between rains, so that nearly everything is in readiness to plant. By the first of the week, unless it

Tucumcari, continued:

rains, the fields will be ready for some planting and the planting will be continued as rapidly as possible until it is finished. There is a great deal of measuring for planting that will have to be done the first of the week. This could not be done before the plats were prepared for planting because the stakes would be torn out in preparation. The measurements will likely consume one day then planting will commence.

Weeds are growing rapidly on the plats to be fallowed. These fallow plats will be plowed as soon as possible, before weed growth draws heavily on the soil moisture. It is quite likely that this plowing will be done sometime the first of the week.

Woodward:

Most off the week was cloudy and rainy; we have had precipitation on five different days. The toral precipitation for the week was 2.97 inches and for June to date 3.47 inches. Most of this rain fell in showers of .40 to .95 inch and fell very slowly. There was very little runoff. Soil samples were taken on the CC milo and show the soil to be well wet down through the sixth foot, which is as deep as the samples were taken.

It has been so wet that practically no field work has been possible until the last three days of the week. Some planting has been done, and the winter wheat and rye on the D.L.A. project has been harvested. The rye check plats and the rye on the rotations which were cut for hay in May have also been plowed.

Mr. Chilcott made an official trip to Wichita, Kansas to look up equipment which it will be necessary to purchase in case the livestock work is started at this station.

Maximum temperature 86; minimum 60; average hourly wind velocity 3.7 miles; evaporation .969 inch; precipitation 2.97 inches.

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JUL 1 1921
BUREAU OF PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 18 1921

REPORT FOR WEEK ENDING JUNE 18, 1921.

AKRON:

Dry weather continues in this immediate vicinity and all crops except corn are beginning to suffer. For the month of May a total precipitation of .50 inch was recorded, whereas the 11 year average is 2.68 inches. For the month of June, thus far, .71 inch has been recorded. The last good rain this section had occurred April 16 when 1.29 inches was recorded. Since that time there has been 1.57 inches with only four days on which more than .15 inch was recorded. Rains of consequence since April 16 are - April 25, .25 inch; April 29, .11 inch; and June 15, .14 inch; May 26, .18 inch; June 4, .10 inch; June 5, .20 inch June 6, .36 inch. The other rains bringing the total to 1.57 inches were of an inconsequental nature. Crops, however, are holding well and rains in the near future would still assure average crops for this region. Barley and oats are in full head and winter wheat is almost in full head. Spring wheat is beginning to head. Oats, barley, and spring wheat are all very short, the spring wheat especially, with heads appearing only knee high. Spring grain yields will be very materially cut short unless rain falls soon. Winter wheat also appears to be suffering except on fallow land. It seems that without rain some very good yields will be obtained from fallowed winter wheat plats.

All the corn plats were cultivated during the week. Corn continues to make progress, apparently finding the warm days and nights agreeable. All fallow strips were disced and the roads between the Cereal Project plats were disced and graded. About three loads of mixed wild grass and sweet clover were put into the barn during the week. Alfalfa will be cut the first of next week. Though in most cases less than knee high cutting will be necessary because the leaves are falling badly because of the drought. Other work consisted of cultivating winter wheat from the Swadley corn variety experiment, and hoeing and pulling volunteer rye from around the sheet rotation fields. Work is progressing on a new hay rack.

Maximum temperature 93; minimum 51; precipitation .15 inch.

ARDMORE:

The week ending June 11, at the Ardmore field station was unusually warm with no precipitation of any consequence. The maximum temperature was 94; minimum 53; precipitation .21 inch.

The crops have so far suffered very little from the abnormally dry season. This is largely accounted for by the early seeding which has made it possible for all small grain crops to use to advantage the limited amount of moisture stored up in the soil. This reserve is practically exhausted at the present time and crops in the future must depend altogether upon summer rains. In their present stage they will require constantly more and more moisture for their development.

The planting of cane was finished at the field station during the week; about 60 acres have been planted in rows to Dakota Amber sorgo. It is expected that this crop will produce an abundance of forage for all dairy cows, beef cattle and horses on the station. It was necessary to reseed a few acres of this crop during the week. This was due to one small field having been seeded too early. The ground was not thoroughly warm and a poor stand was secured. There still is time for planting this crop with expectations of a good yield.

BIG SPRING:

With the exception of a light shower of .27 inch which fell on Sunday the 12th, the week has been dry and favorable for farm work. The varieties of grain

Big Spring, continued:

sorghums that were replanted on the 10th are up to a good stand. All plats and row crops of the earlier planting were cultivated during the week. Considerable thinning was done on the milo plats in the rotations and c.c. series. Early peaches and plums are ripening but considerable damage in the fruit is showing up as a result of the hail on May 31. Mr. W. M. Osborn from the Lawton station was a visitor during the week.

Maximum temperature 92; minimum 66; wind velocity 5.5 miles per hour, evaporation 2.07 inches; precipitation .27 inch.

CORDY:

Winter wheat is filling nicely. The early wheat would probably make a good berry without any additional moisture. Heads on the late wheat are noticeably longer and greener. Early wheat is going to be very short, this includes heads, straw, and yield. The early fall plowed plats, having suffered most from the drought, will recover the least. It is quite noticeable now that those plats which had the rankest and heaviest growth in the early spring now have the shortest straw and are the most spotted.

Barley has good length of heads but thin stands. Barley throughout the county looks more uniform than any of the small grains.

All sorghums had to be replanted on the plats. This work was done the first of the week, as this was as soon as the ground would do to work. Corn is looking fine. All corn plats were cultivated during the week.

Most of the sorghums that were planted previous to the wet period had to be replanted. Not all sorghum seeding is done now.

Wheat harvest will probably start a few days before the first.

Maximum temperature 90; minimum 58; evaporation 1.718; precipitation .01; wind velocity 10.6.

DALHART:

The weather conditions tha past week have been both favorable and unfavorable. The team was run out of the field twice during the week from planting. Two days were so windy that teams had to be taken from plowing and put onto the cultivators to stop soil blowing, where crops were already up.

On Monday the milo and cowpeas were planted on the rotations. This planting was finished in the rain. It began to rain when there were two plats of cowpeas to plant but was not raining so hard but that the planting could be finished. By the time the team reached the implement shed it was raining hard and hailing some. With this planting the work is finished with the D.L.A. project. Kafir on the rotations is up to a good stand. All fallows were plowed on Tuesday (the 14th). The rain of Monday p.m. was not so heavy but that plowing could be safely done Tuesday. Soil samples were taken on this date on the m.c. milo, plats A, B, C, and D. One plow continued working on the Cereal block for the varieties. Delayed again for half a day on plowing on account of rain Tuesday night. Plowing was continued Wednesday p.m. and some cultivating was done to stop soil blowing. Plowing and harrowing of the Cereal block was finished Thursday. Friday the last date was planted, also all varieties in the Cereal and Forage work. The plats were plowed and harrowed for the cowpea variety test Friday.

Winter wheat varieties are looking fine and will be ready to harvest soon. Rye is also nearly ready to harvest. Oats are ripening rapidly and unless hailed out a bumper crop will be harvested. The oats that are on the sweet clover stubble have a much better color than any of the others and will outyield the others.

Maximum temperature 89; minimum 56; precipitation .40 inch.

GARDEN CITY:

Warm weather this week followed the wet spell of last; this combination provided ideal growing conditions for all crops and also the weeds. Milo that was planted since the rain came up to a good stand in four days time.

The work this week consisted of discing roadways and cultiveting fallow plats and alleys; the June 15 date of planting was also made this week.

Wheat is ripening up very fast now and will probably be ready to harvest in about another week.

Maximum temperature 93; minimum 61; precipitation 0.

HAVRE:

For the week ending June 11, temperatures were rather high with a maximum of 89 and with .28 inch of precipitation. The first of the present week was extremely unfavorable, with a temperature on Monday of 96 accompanied with some southwest wind. On the 15th there was a change in temperature accompanied by a rain of 1.26 inches which fell in a period of about four hours. Some of the rain has been damaged, but is fastly recovering since the rain. During the last of the present week temperatures have been below normal with cloudy weather.

The Pale Western cut worm continues to work and has taken most of the large fields of corn in this part of the county. A few of the rotation plats that were early spring plowed seem to have escaped damage. The late plowed plats and some of the fall plowing is almost completely destroyed and will be reseeded. Plats that are not damaged to do great an extent will be replanted with a hand dropper as soon as the worms disappear. The damage to grain crops in the county is much more than it was last season. There are many large fields on fallow land where the grain as well as the weeds have been entirely cut off and the land at present is as clean as though it has been freshly plowed.

HAYS:

Generally the week has been fair and quite warm, to hot.

The week has been spent very largely at weed killing, cultivating and plowing. Soil moisture samples were taken on several winter wheat plats and a few fallow plats.

Harvest is rapidly approaching. Six or eight plats of winter wheat on the Dry Land Project are now ripe enough to be cut. Harvesting will begin on the project Monday. The Cereal project harvest commenced yesterday. Wheat generally is maturing in this vicinity about a week to ten days earlier than usual.

HETTINGER:

Report for the two weeks ending June 19. A great deal of damage to the grain crop was caused by the hot winds on the 11th, 12th, and 13th. The maximum temperature was 106 with a 22 mile southwest wind. This was relieved on Tuesday with a rainfall of .58 inch and on the 18th with a rainfall of .81 inch.

The oats on the rotations burned badly, also the wheat on disced stubble and continuous listing. The corn crop is far advanced on the station and in the community. We have a perfect stand on the rotations and on the general farm field.

The work for the two weeks consisted of harrowing corn, trimming plats, cultivating alleys, cutting the first crop of alfalfa, spraying trees, thinning sugar beets, plowing the fallow plats, and odd jobs about the station.

Maximum temperature 106; minimum 55; precipitation 1.40 inches.

HUNTLEY:

Hot, windy weather early in the week did much to dry out the soil and spring sown small grains were beginning to burn. The droughty condition was relieved by a rainfall totalling 1.21 inches during the last two days, over an inch of which fell in a shower lasting several hours.

The cultivation of roads and alleys was practically completed during the week and the last of the regular fallow plats were plowed. Considerable attention has been given to roguing volunteer grain out of flax and corn plats.

Station visitors this week have included G. W. Morgan of the Assiniboine field station; Leroy Moomaw, of the Dickinson, N. Dak. station, and Dr. Trowbridge of the North Dakota State station.

Maximum temperature 92; minimum 49; precipitation 1.25 inches.

LAWTON:

The drought was broken on June 5 and since that date we have had eleven days of rain, with a total precipitation of 5.20 inches. Some washing occurred on a few rotation plats and it was necessary to hoe dirt around cotton stalks on a number of plats.

All plats were trimmed during the week and the disc will be run along the roadways when the ground is dry enough. Two cultivators have been kept going the past two days where the ground was sufficiently dry.

The station light plant has been giving a great amount of trouble the past year or two, and the past week the station was connected with the Lawton city light line. One day was spent in hauling poles, cross arms, and other paraphernalia and in setting poles.

Chinch bugs have ruined several rotation plats of kafir and milo, and seriously damaged many others. The spray tank has been run the past two days and about twenty plats were sprayed. It is nearly impossible to kill a large percentage of the bugs without burning the plants. Serious injury has occurred on several early date plats in field C, but as these plats lie nearly a mile from the buildings, spraying is not practicable.

Mr. Osborn went to Big Spring Monday and returned Thursday.

Corn is tasseling and is in excellent condition except where it lies next to wheat plats. Corn in two year rotations No. 249 to 254 inclusive is badly infested with chinch bugs, as these plats lie immediately south of the wheat plats in the corresponding rotations.

Maximum temperature 88; minimum 65; wind velocity 6.5 miles; precipitation 2.17 inches.

MANDAN:

Agronomy.

The fall plowed corn plats have been hoed; they had become more weedy than any of the spring plowed plats.

The feed fields of corn were cultivated. Corn in general is making good growth.

Part of the larger fields of brome have been harvested. The yields were not heavy, but were better than they have been since the fields were established.

The rain which came on the night of the 15th was needed by most of the crops. The F plats of small grain had started to burn. The total precipitation for June is still below the average.

Mandan, continued:

Cooperative Grazing Experiment.

The brome grass seeded on sod for the cultivated pasture has produced a good stand. It will require more rain soon before it is established.

Feed in all pastures is abundant and the cattle appear to be putting on good gains.

The thirty acre pasture now appears nearly white with the pasture sage (Artemisia frigida). This condition has been brought about by the heavy grazing.

Prof. J. H. Shepperd of the North Dakota Agricultural College was a visitor during the week.

Maximum temperature 93; minimum 57; precipitation .65 inch.

NORTH PLATTE:

High, dry winds, bordering on the "hot" variety have prevailed for the past two days. Grain crops show the need of moisture badly. June rainfall to date totals .94 inch, with only .13 inch occuring since the 10th. All grains are in head, and the height is fair. Moisture samples taken early in the week show less than two per cent of available moisture in plats continuously cropped.

The first crop of alfalfa is being put up on the station. Early cherries are ripe and picking was begun today. There is about one-fourth of the usual crop.

Corn on the D.L.A. plats is about eight inches high, and is being thinned to count. Perfect stands have been secured on all plats which have been counted.

SHERIDAN:

The first part of the week was exceptionally hot for this period of the year and accompanied by high winds for a portion of the time. All grain crops were seriously damaged by the heat and drying winds. While there had been moisture up to this time sufficient to maintain growth, and the crops seemed to be in fairly good condition. Nearly all of the grain began to fire badly the first of the week. The last three days have been cooler and cloudy a large part of the time, and grain on fallow and on land that was in stubble during the winter appears to be in fairly good condition. Nearly all grain on fall plowing and winter wheat stubbled in is in very poor condition. Oats appears to have been affected more than wheat. Corn, cane Sudan grass, and other row crops have made a rapid growth during the week.

While there have been several local showers during the week, but little of the moisture has fallen in this locality.

Maximum temperature 100; minimum 45; precipitation .20 inch.

TUCUMCARI:

Fine progress has been made with field work and planting during the past week in spite of several rains. Rains occurred on Monday and Tuesday, also one on Sunday. Field work could not be started until Wednesday and then only in the south field. On this date the date of planting was made, also all varieties in the Cereal and Forage planting. On Thursday the plats were prepared for planting everything in the center field. On the 17th milo and kafir was planted in the center field on m.c. plats and rotations. The last two plats of kafir were planted in the rain. This rain stopped field operations until noon Friday. By this time the sorgo was planted on the m.c. plats in the center field and Sudan on 299 A. Planting was commenced in the north field Saturday p.m. and everything planted except cowpeas down to rotations 165 and 168. Planting was continued two

Tucumcari, continued:

hours overtime in order to take advantage of favorable weather. Monday the remaining rotations in the north field were finished with the exception of peanuts, cowpeas, and the drilled plats. These would have been finished but a rain stopped operations at noon. Planting peanuts (which had to be planted by hand) was commenced after the shower in the p.m. Monday when the weather looked favorable. Before the drilling could be done or even started another rain came up which lasted for about two hours. Drilling will be finished Tuesday and this will wind up all experimental planting with the exception of the last date and cowpeas on the rotations. Cowpeas will be planted in a few days.

Winter wheat is still alive but not over two inches high. Rye is headed and will make a fair yield. The rye plats will have to be trimmed to 1/20 A each so that a comparable yield can be obtained.

WOODWARD:

We have had excellent growing weather during the past week. Have had slight amounts of precipitation on three different dates, and all crops are making rapid growth.

We have finished harvesting our wheat; a variety test of cowpeas for hay has been planted. Considerable thinning has been done on both the D.L.A. and Cereal Projects and most of the experimental crops and some of the fields have been cultivated. Soil samples taken on the cc milo show a good supply of moisture at all depths up to six feet.

An election is being held today (Saturday) to decide whether or not the city of Woodward will issue bonds to buy land for the addition of a livestock department to this station.

Maximum temperature 92; minimum 63; average hourly wind velocity 7.7 miles; evaporation 2.154; precipitation .61 inch.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 25 1921

REPORT FOR WEEK ENDING JUNE 25, 1921.
(Except as otherwise indicated.)

AKRON:

Two showers of .12 inch each occurred about the middle of the week which gave temporary relief from the hot, dry weather. Cultural methods probably have never shown up to better visual advantage than this season. All crops - small grain crops - will have yields cut short by the lack of moisture, the amount depending on cultural methods largely. Winter wheat on fallow bids fair to yield from 18 to 20 bushels to the acre while winter wheat on M.C.A. does not promise more than 10 to 12 bushels. Spring wheat and oats also are injured, probably beyond recovery. Barley does not appear to be damaged so badly, and that sown on the corn stubble or the sheep rotations where the sheep were pastured all winter appears not to be suffering at all. Early sown winter wheat fields are turning rapidly and in many cases harvest will commence by the end of the coming week. It is felt that station harvest will begin not later than the week following. Winter wheat generally over the county promises good yields. One commercial field not over two and one half miles from the station, sown on fallow, has variously been estimated to yield from 30 to 40 bushels to the acre.

Rotation corn plats were cultivated during the week, and part of the other corn projects were gotten over. Sorghum and millet varieties are emerging to stands. Spring wheat is in full head and very short. Rabbit damage to several of the wheat plats is great. Other work about the station consisted of getting ready for the farmers' picnic to be held here on the 25th. The Forestry project was cultivated.

A crowd estimated at from 1800 to 2200 people were present at the station Saturday. Professor George E. Motton of the State Agricultural College delivered an address on diversification and Mr. Ford of the Agricultural Department of the Burlington Railway discussed crop rotations. Other entertainment provided were foot races, tug-of-war, and a base ball game.

Maximum temperature 92; minimum 45; precipitation .35 inch.

BELLE FOURCHE:

At the beginning of the week the soil moisture content of plats cropped last year was near the minimum point. The rains of this week have added some available moisture to the soil in addition to maintaining the growth of crops. There is now enough available moisture in the soil to last the crops several days.

While there has been no actual wilting or firing of crops, the shortage of moisture has shown itself in the way crops have developed. Grain on plats cropped last year has wilted very little and is heading out at a height of from 8 to 10 inches. The number of stalks per plant is so low that a good yield is impossible, even under the most favorable conditions.

Maximum temperature 95; minimum 54; precipitation 1.02 inches.

BIG SPRING:

On Monday night, the 20th, a good rain fell amounting to 1.25 inches which will be of great benefit to growing crops. Very little run-off occurred and as the rain was general over the county crop and range conditions are good at this time. The station work this week has consisted of thinning cotton in the rotation c.c. and variety plats. A part of the variety plats of the grain sorghums were also thinned and a good stand was secured on most of these plats from the replanting made early in June. All the cotton, peas, and variety plats of the sweet sorghums were cultivated the latter part of the week. If conditions remain favorable for the next few days all the crops on the station will be cultivated over and will be in fine shape.

Big Spring, continued:

Maximum temperature for the week 95; minimum 59; wind velocity 4.0 miles per hour; evaporation 2.25 inches; precipitation 1.25 inches.

COLBY:

Winter wheat on all early fall plowed plats and on fallow begins to look as if it will do to harvest the first of next week. Wheat is filling good. The harvest period will be scattered out fairly evenly from appearances now, as the later wheat is not turning very much. There is going to be considerable damage from hessian fly on some of the plats. This is the first season that Hessian fly has been a menace in this locality. Wheat harvest in this county will be well under way by the middle of next week. Oats and barley are looking considerably thicker since they have gotten headed out. Spring wheat is looking uniformly good, except on the MC shallow spring plowing. The replanting of the milo is up to a good stand. Weeds are doing fine.

Corn is knee high on the surface planting and is looking fine. Peas were plowed under for green manure this week. They were about 30 inches high and had a great deal of foliage.

Mr. S. D. Flora of the Weather Bureau office at Topeka was a station visitor this week.

Maximum temperature 93; minimum 52; precipitation .65 inch.

DALHART:

Two rains occurred during the fore part of the week, which delayed field operations until Friday. During this time some good work was accomplished with the hoes. Weeds have made such good progress during the wet spells that much additional work will have to be done for a clean-up.

The ground was covered with small weeds just beginning to get a good start on the plats. Two days cultivating will finish all these as they have not sufficient growth to bother. The larger part of the north field was cultivated Saturday (the 25th). This covered all plats that were showing up weedy. The three dates, M.C. plats, and varieties on fallow will be cultivated the first of the week. There is still some planting to be done in way of feed crops, but everything else is finished. Harvesting of small grains will be started next week.

Maximum temperature 89; minimum 51; precipitation 1 inch.

DICKINSON:

Crop prospects have greatly improved during the past two weeks due to timely rains. On the 15th a rain of 1.52 inches came just as grains were burning badly. A good rain fell on the night of the 18 and another on the 25th. Total rainfall to date in June is 3.09 inches.

Grains are heading much shorter than last year and moisture conditions will have to be good from now on in order to obtain average yields. Corn, potatoes, and other cultivated crops have grown rapidly and are generally clean. Alfalfa and sweet clover plats were cut during the week. White sweet clover produced the heaviest growth and cultivated rows of both crops were better than broadcast seedings. Alfalfa in the larger fields is very light.

Through train service on the Northern Pacific will be resumed on the 26th for the first time since the night of the 17th when about 20 miles of track were carried away by the cloudburst in the Bad Lands about 60 miles west of Dickinson. This is the worst flood since the Northern Pacific line was completed through here in 1881. It is estimated by railroad

Dickinson, continued:

officials that it will cost almost a million dollars to replace the damaged line.

Maximum temperature 96; minimum 53; precipitation 1.18 inches.

EDGELEY; report of week ending 18th:

Warm, showery weather prevailed throughout the week with a heavy rain of 3.10 inches on the 17th. Some hail fell on the 17th, which did considerable damage to corn, but did no appreciable damage to wheat, oats, or barley. Rye was damaged quite badly by hail and the heavy driving rain.

Maximum temperature 87; minimum 55; precipitation 3.70 inches.

EDGELEY:

The temperature has ranged high for the past week. The heavy dashing rain which fell last Sunday did considerable damage to the rye crop. Corn is recovering nicely from the damage caused by hail which fell last week. Barley is headed out and wheat is beginning to head.

Maximum temperature 93; minimum 54; precipitation 1.40 inches.

GARDEN CITY:

Another rain of 1.37 inches fell on the 22nd and 23rd. Although it was of great benefit to the row crops, it delayed field work for about half the week which gave the weeds another good chance to get started.

Wheat in this vicinity is ripening up very fact now, and a good many farmers are starting harvesting; by the first of the week harvest will be in full swing throughout the valley.

The work this week has consisted mainly of cultivating and thinning some of the early planted crops.

Maximum temperature 88; minimum 56; precipitation 1.37 inches.

HAVRE:

Growing conditions during the past week have been very favorable for growing crops, with precipitation amounting to .62 inch, with a maximum temperature of 86, and a minimum of 47. In sections of this part of the state there were torrential rains on the 22nd and 23rd, while in other places there was no rain at all. During the week four tillage demonstrations gotten up by County Agent Campbell were attended. These were scattered over the entire county of Hill. There is a large variation in the condition of crops, caused to no small extent by damage of the Pale Western Cut Worm. Many fields in on fallow are completely bare of even weed growth. However, most of the damaged seems to be on stubbled-in and on late spring plowing. The general opinion seems to be that early spring plowing acts as a preventative.

During the week corn was reseeded where it is on fall plowing, after a grain crop. Other plats were gone over and reseeded by hand dropper. Those on early fall plowing were injured very slightly. Cultivating roadways and row crops, plowing the fallow blocks, and cutting the grain hay crops have taken most of the time during the week.

Mr. Westover, of the Office of Forage Crop Investigations left on the 21st after a visit at the station of four days.

HUNTLEY:

The warm, humid weather continued through the past week and all crops have made considerable growth. Spring sown small grains are beginning to look dry again and some plats of oats and barley are heading. Winter wheat being very thin to stand is still making a good growth and has good color. Flax is blossoming.

Field work consisted in hoeing cultivated crops; cleaning out the weeds missed by the cultivator. The second round of soil sampling was completed. The samples taken this week show a continued loss of moisture from all cropped plats in spite of the fact that our rainfall has been considerably above normal for the past month. Yields of spring grains will be entirely dependent upon the amount and distribution of the moisture that falls between now and the time of maturity.

Maximum temperature 90; minimum 53; precipitation .21 inch.

LAWTON:

Although the precipitation for the week totalled only .71 inch, rain fell on five consecutive days and prevented field work a portion of the time. Soap and oil emulsion was made the first part of the week and about forty row plats have been sprayed. Some plats have been seriously burned by the spray solution and only indifferent success resulted from the attempt to kill chinch bugs.

All plats except corn have been cultivated this week, while corn plats in A are being cultivated with the walking cultivator today. Corn is in tassel and six to eight feet tall.

Fallow plats and roads were disced, orchard cultivated, and hoed, and several weedy plats hoed the past few days.

June rainfall to date is nearly 6 inches and crops would be in excellent condition were it not for chinch bugs. These are more widely scattered over the station than last year and will doubtless cut the yield of all corn and sorghum plats, while a number of plats have already been practically ruined.

Spraying will be continued for another day or two and then plat threshing will be done if the weather is favorable.

Maximum temperature 88; minimum 62; average wind velocity 4.6 miles; evaporation 1.149 inchs.

NORTH PLATTE:

Another week has passed without any precipitation. Winter wheat and rye are ripening very rapidly, and harvest will be begun some time during the coming week. Moisture on practically all grain plats is very low. Cool nights have prevented the grain from suffering severely. Unless there is a relief from the dry weather, however, all late grains will make a short crop. Alfalfa is making practically no recovery since the first crop was removed, and pasture is becoming quite dry. Corn is making rapid growth and the last cultivation will be made on some of the fields the coming week.

High water carried away five spans of the bridge on the South Platte river on June 13. Since that time station produce has been ferried across the stream, and transferred on the other side. It will probably be some time before automobile traffic will be resumed.

SCOTTSBLUFF:

The hottest weather of the season occurred the past week. The mean maximum was unusually high. Evaporation was also very high as compared to

Scottsbluff, continued:

any previous period of the season, and as a consequence many of the small grain plats are firing badly. Corn is making a very rapid growth now, having been held back considerably by the cool weather of the early season. The yields will be light on the alfalfa and sweet clover plats which were cut during the week. The first crop of alfalfa all over the project is very light due to a shortage of irrigation water, caused by a serious break in the main canal.

Station visitors included Prof. R. W. Goss, Plant Pathologist from the State University.

Maximum temperature 95; minimum 46; precipitation 0.

SHERIDAN:

The weather has continued quite warm but without as much wind as during the previous week. A good rain fell last Saturday evening and relieved drought conditions to some extent. All grain crops on land which went through the winter bare, without the exception of fallow, are very poor, however, and all crops are heading out very short. Corn, cane, and Sudan grass, and millet, have all continued the rapid growth of the previous week, and prospects for these crops are good at present. Alfalfa and sweet clover were cut for hay during the week. These crops were very short, some of the plats seeded solid being practically a failure.

All of the rotation plats left for fallow and the block to be fallowed for the Cereal work were plowed and packed. Some fallow for feed crops still remains to be plowed.

Messrs. J. M. Stephens and L. Moomaw visited the station during the week.

Maximum temperature 94; minimum 49; precipitation 1.11 inches.

TUCUMCARI:

No rain occurred during the past week. Field operations have progressed rapidly. Everything is planted with the exception of cowpeas and they will be planted the first of the week. Cowpea seed is being shipped from Dalhart for this planting as none could be procured elsewhere. The local seedman in Tucumcari has been trying to get some cowpea seed for the past 60 days but there does not seem to be any for sale.

The odds and ends of station land wase plowed and prepared for planting this week and seeded to feed crops. The west end of the north field was planted to milo and kafir for seed and a small stip drilled to cane for feed. The windbreak strip was also drilled to cane.

All varieties and the second date of planting are up to a good stand.

Maximum temperature 87; minimum 49; precipitation 0.

WOODWARD:

We have had another week of rain, with a measurable amount of precipitation on six days of the seven. Harvest is progressing in this section as fast as the weather will let it. The wheat is very ripe and the farmers are heading whenever it is dry enough, so that they can get into the fields. The wheat is still standing up well in this section.

Precipitation for June to date has amounted to 5.78 inches, which is 2.64 inches above the 26-year average for the month of June.

Work during the week has consisted of plowing fallows in the rotations cultivating, and thinning when it was dry enough; discing the orchard; some road work, and a lot of odd jobs.

Woodward, continued:

The city bond election which was held on the 18th, for the purpose of voting bonds to buy land for the addition of a livestock department to this station carried by a vote of 210 for and 38 against.

Maximum temperature 90; minimum 58; average hourly wind velocity 5.1 miles; evaporation 1.539 inches; precipitation 1.75 inches.